

## CRITICAL VALUES

1. Some lab results clearly indicate the patient is in need of immediate attention or in serious danger; these are critical lab results and must be reported to the provider immediately.
2. Following is a list of critical lab results. When these results are obtained in the laboratory, they should be reviewed by the section supervisor, repeated, and then immediately reported BY PHONE to the provider, clinic, or physician's office that requested the test. This report must be documented in CHCS and include the date, time, and name of the person contacted. Leaving results on an answering machine is not acceptable.

### CHEMISTRY

<u>TEST</u>		<u>BELOW</u>	<u>ABOVE</u>
Alcohol (ethanol)		None	$\geq 300$ mg/dl
Bilirubin (neonatal)	Premature Infant:	None	$\geq 15$ mg/dl
	Term Infant:	None	$\geq 20$ mg/dl
BUN	Adult:	None	$\geq 50$ mg/dl
	Infant:	None	$\geq 30$ mg/dl
Calcium	Adult:	$\leq 6.0$ mg/dl	$\geq 12.0$ mg/dl
	Newborn-13yr:	$\leq 2.0$ mg/dl	$\geq 12.0$ mg/dl
Carbon Dioxide (CO <sub>2</sub> )	Adult:	$\leq 10$ mEq/L	$\geq 40$ mEq/L
	Children:	$\leq 10$ mEq/L	$\geq 30$ mEq/L
CK		NA	$\geq 350$ mg/dl
CKMB			$\geq 5.5\%$ of total CK
Creatinine			$\geq 4.0$ mg/dl

Phosphorus		$\leq 1.0$ mg/dl	$\geq 8.0$ mg/dl
Potassium	Normal Serum:	$\leq 2.5$ mEq/L	$\geq 6.5$ mEq/L
	Hemolyzed Serum:	$\leq 2.5$ mEq/L	$\geq 6.5$ mEq/L
Sodium	Adult:	$\leq 125$ mEq/L	$\geq 155$ mEq/L
	Infant:	$\leq 130$ mEq/L	$\geq 155$ mEq/L

#### THERAPEUTIC DRUGS

<u>TEST</u>		<u>BELOW</u>	<u>ABOVE</u>
Carbamazepine (Tegretol)		None	$\geq 20$ ug/ml
Digoxin (Digoxin or Lanoxin)		None	$\geq 2.0$ ng/ml
Phenobarbitol		None	$\geq 60$ ug/ml
Phenytoin (Dilantin)		None	$\geq 20$ ug/ml
Salicylate	Adults:	None	$\geq 300$ mg/dl
	Children:	None	$\geq 100$ mg/dl
Theophylline		None	$\geq 20$ ug/dl

## HEMATOLOGY

<u>TEST</u>		<u>BELOW</u>	<u>ABOVE</u>
Hematocrit		$\leq 20\%$	$\geq 55\%$
	Newborn:	$\leq 33\%$	$\geq 65\%$
Hemoglobin		$\leq 7.0$ gm/dl	$\geq 19$ gm/dl
	Newborn:	$\leq 9.0$ gm/dl	$\geq 22.5$ gm/dl
Fibrinogen		$\leq 70$ mg/dl	None
Partial Thromboplastin Time (PTT, APTT)		None	$> 60$ seconds
Platelet Count	Adult:	$\leq 20,000/\text{mm}^3$	$\geq 1,000,000/\text{mm}^3$
	Pediatric/Newborn:	$\leq 30,000/\text{mm}^3$	$\geq 1,000,000/\text{mm}^3$
Prothrombin Time (Protime, PT)		None	$\geq 40$ seconds
WBC		$\leq 2,500/\text{mm}^3$	$\geq 25,000/\text{mm}^3$

## Qualitative Critical Results

### Hematology

Presence of blasts on blood smear.  
New diagnosis or findings of leukemia.  
Presence of sickle cells (or aplastic crisis).  
Presence of malarial parasites.

### Microbiology

Positive results of gram stain from CSF or body cavity fluid.  
Positive blood culture.  
Salmonella, Shigella, Yersinia, or E.coli 0157 on stool culture.  
Positive RSV.

## IMMUNOLOGY

Positive RPR (test for Syphilis)

## CLINICAL MICROSCOPY AND URINALYSIS

Elevated WBC count in Cerebrospinal fluid.

Presence of malignant cells, blasts, or microorganisms in CSF or body fluids.

Combination of strongly positive test results (4+) for glucose and ketones in urine.

Presence of pathological crystals (i.e.: urate, cystine, leucine, or tyrosine) in urine.

Presence of large numbers of casts in urine.

## REFERENCE

Kost, Gerald J., MD, PhD. JAMA: Critical Limits for Urgent Clinical Notification at US Medical Centers. February 2, 1990-Vol. 263, No. 5.

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